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RECORDED

A New or Improved Process of Manufacturing from Cereals and Pulse an Extract containing Nutritious Value of the Seeds without the Coarse Fibres, the Extract being Obtained from the Bran and similar Covering.

[*Communicated from abroad by Hermann Lehrenkrauss, of Stuttgart, in the Empire of Germany.*]

PROVISIONAL SPECIFICATION.

I ALFRED JAMES BICKMORE Clerk to Walter Alfred Barlow Patent Agent and Engineer of 6 St Pauls Churchyard in the city of London do hereby declare the nature of the said invention for A NEW OR IMPROVED PROCESS OF MANUFACTURING FROM CEREALS AND PULSE AN EXTRACT CONTAINING NUTRITIOUS VALUE OF THE SEEDS WITHOUT THE COARSE FIBRES, THE EXTRACT BEING OBTAINED FROM THE BRAN AND SIMILAR COVERING, a communication to me from abroad by Hermann Lehrenkrauss of Kernerstrasse 13 Stuttgart in the Empire of Germany Baker and Confectioner to be as follows :—

This invention relates to a new or improved process of manufacturing from cereals and pulse an extract containing nutritious value of the seeds without the coarse fibres the extract being obtained from the bran and similar covering, said extract being for use in bakers and confectioners articles soups and so forth.

By the ordinary method of preparing flour or meal from cereals and pulse for the making of bread and the lighter kinds of fancy pastry, only one part of the corn or pulse, namely the white, half white or black flour is usually employed, and in the so called "Graham's bread" or coarse bread wherein all the component parts of the grain are used, there is even in the finer qualities a coarse fibre which though ground very fine is from its flinty nature found to cause great irritation of the intestines.

As the soluble extract matter of the bran or husks contains very valuable nutriment the object of this invention is the preparation of an extract containing all the nutritious parts of the bran or husks without the injurious bran fibres.

The so called "extract" from the bran or husks of cereals and pulse or of a mixture of the same herein specified consists essentially of the phosphate of lime, salts, vegetable albumen, vegetable gelatine, and so forth freed and separated out

[*Price 4d.*]

from the coarse and flinty fibre of such bran or husks: that is the direct covering of the seeds are to be dealt with and such extracts may for brevity be collectively distinguished as "corn extract."

The essential novelties of the invention are

(1) that in articles made with the corn extract obtained by this improved process only the extract matter of the bran is added to the pastry.

(2) The manner of making the extract: By the usual process of grinding the bran is ground so fine as to render it very difficult to separate the coarse fibres therefrom.

In order to effect this the grain after cleaning is moistened with just sufficient water and allowed to stand long enough to soften the adherent coating of bran so that the same by subsequent milling will be removed in large flakes. The bran obtained in this way is freed as much as possible of the starch contained therein and then mixed with five times its proportion of water and boiled down in a kettle or steam boiler until the extraction is completed. The coarse fibres are separated from the extract by pressing it through flannel.

The glutinous extract thus obtained is thickened by condensation to the consistency of syrup and may be kept in bottles or jars until required for use in the preparation of articles of pastry and so forth. (3) The novel methods of rendering light the pastry or articles made with the preparation (*a*) without fermetation— By completely mixing and working the corn extract with flour (and in the case of pastry and so forth with the other ingredients used) small bubbles of air and water are formed in the mass which by heat in the process of baking expand and so make the bread or other articles light as desired:—(*b*) with fermentation. The corn extract with some flour is stirred in lukewarm water and left to ferment under heat, which very soon takes place when it will be used in making dough.

Dated this 16th day of October 1884.

WALTER A. BARLOW,
6, St. Paul's Churchyard, E.C.

A New or Improved Process of Manufacturing from Cereals and Pulse an Extract containing Nutritious Value of the Seeds without the Coarse Fibres, the Extract being Obtained from the Bran and similar Covering.

COMPLETE SPECIFICATION.

I ALFRED JAMES BICKMORE Clerk to Walter Alfred Barlow Patent Agent and Engineer of 6 St Pauls Churchyard in the city of London do hereby declare the nature of the invention for A NEW OR IMPROVED PROCESS OF MANUFACTURING FROM CEREALS AND PULSE AN EXTRACT CONTAINING NUTRITIOUS VALUE OF THE SEEDS WITHOUT THE FIBRES THE EXTRACT BEING OBTAINED FROM THE BRAN AND SIMILAR COVERING and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

This invention relates to a new or improved process of manufacturing from cereals and pulse an extract containing nutritious value of the seeds without the coarse fibres the extract being obtained from the bran and similar covering said extract being for use in bakers and confectioners articles soups and so forth.

By the ordinary method of preparing flour or meal from cereals and pulse for the making of bread and the lighter kinds of fancy pastry only one part of the corn or pulse namely the white, half white, or black flour is usually employed and in the so-called "Graham's bread" or coarse bread wherein all the component parts of the grain are used, there is even in the finer qualities a coarse fibre which though ground very fine is from its flinty nature found to cause great irritation of the intestines.

As the soluble extract matter of the bran or husks contains very valuable nutriment the object of this invention is the preparation of an extract containing all the nutritious parts of the bran or husks without the injurious bran fibres.

The so-called "extract" from the bran or husks of cereals and pulse or of a mixture of the same herein specified consists essentially of the phosphate of lime, salts, vegetable albumen, vegetable gelatine and so forth, freed and separated out from the coarse and flinty fibre of such bran or husks; that is the direct covering of the seeds are to be dealt with, and such extracts may for brevity be collectively distinguished as "corn extract."

The essential novelties of the invention are:—

(1) That in articles made with the corn extract obtained by this improved process only the extract matter of the bran is added to the pastry.

(2) The manner of making the extract:—In order to carry out this invention the grain is moistened with just sufficient water and allowed to stand long enough to soften the adherent coating of bran and to effect this about 100 parts by measure of grain or pulse is mixed with 15 parts of water and allowed to stand for 15 minutes at a temperature of from 15° to 18° Celsius which gives a separation never hitherto obtained so that in the subsequent process of milling, the bran covering will be removed in large flakes instead of being ground. The bran obtained in this way is freed as much as possible of the starch contained therein

and then mixed with five times its proportion of water and boiled down in a kettle or steam boiler until the extraction is completed. The coarse fibres are separated from the extract by pressing it through flannel felt or suitable filtering medium.

The details of this extraction process are as follows:—The bran is digested with ten times its weight of water for three hours at a temperature of about 50° Celsius. After this the liquid is filtered and the residue pressed and digested in the described manner a second time. It is again filtered in a press and lastly boiled in a like quantity of water. The bran is then completely exhausted and contains only woody fibres. The solutions thus obtained from the digested bran or husks are concentrated in vacuo to about the consistency of syrup, and may be kept in bottles or jars until required for use in the preparation of articles of pastry and so forth, or may be dessicated to a dry powder.

(3) The novel methods of rendering light the pastry or articles made with the preparation (*a*) without fermentation—By completely mixing and working the corn extract with flour (and in the case of pastry and so forth with the other ingredients used) small bubbles of air and water are formed in the mass which by heat in the process of baking expand and so make the bread or other articles light as desired:—(*b*) with fermentation:—The corn extract with some flour is stirred in luke warm water and left to ferment under heat which very soon takes place when it will be used in making dough.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is

Firstly. In the process of manufacturing the extract from bran or husks of cereals and pulse the method of separating the coating of bran or husk as herein specified.

Secondly. The method of obtaining an aqueous extract from the separated bran or husks whether the same be desicated to dryness or not, and the adding of this extract to drinks, soups, pastry, and other articles of food as herein set forth.

Thirdly. The method of making dough light (causing dough to "rise") by this extract as herein set forth.

Dated this 16th day of July 1885.

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Agent for Alfred James Bickmore.

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